REMARKS

I. Status of the Claims

Claims 18-22, 28, 29, 31, 32 and 34-75 are pending in the application and are subject to a restriction requirement. Claims 68-75 are canceled in the amendment above, and claims 18, 20, 21, 28, 31, 32, 65 and 67 are amended. A marked up copy of the amended claims is included in Appendix A, and a clean copy of the pending claims is included in Appendix B.

II. Response to Restriction Requirement

Applicants provisionally elect Group I, SEQ ID NO:100, with traverse. The basis of the traversal is the cancellation of claims 68-75 and the amendment of claim 28, which eliminates any reference to particular sequence ID's, and the basis for the restriction. Should the examiner determine that a restriction remains necessary, a telephonic interview is respectfully requested.

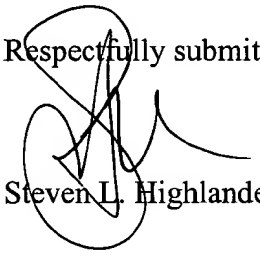
III. Request For Interview

At such time as the examiner receives this response and undertakes substantive examination, applicants respectfully request a telephonic interview. As can be readily ascertained by reference to the file history, this application has already been subjected to considerable delay during prosecution, stemming primarily from the repeated issuance of restriction requirements. Thus, applicants hope to expedite prosecution by interviewing the examiner as early as possible.

IV. Conclusion

Should Examiner Helms have any questions regarding this response, a telephone call to the undersigned is invited. Please date stamp and return the enclosed postcard as evidence of receipt.

Respectfully submitted,



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Date: December 27, 2002

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APPENDIX A: MARKED UP COPY OF AMENDED CLAIMS

18. (Amended) An anti-human antigen receptor, the receptor being low or not immunogenic in humans, the receptor being [obtained by a method comprising the steps of:

selecting a combination of functionally rearranged] further characterized as comprising a human VH chain and a human VL [immunoglobulin chains] chain wherein at least said VH chain is derived from essentially unprimed mature human B-lymphocytes and said VL chain is derived from a naturally occurring human B cell repertoire[, said chains being expressed from a recombinant vector and using an in vitro display system for binding to a human antigen].

20. (Amended) The anti-human antigen receptor according to any one of claims 18, 19, 65, 66 or 67, said anti-human antigen receptor [being specific for] recognizing a human tumor antigen.

21. (Amended) The anti-human antigen receptor according to any one of claims 18, 19, 65, 66 or 67, said anti-human antigen receptor [being specific for] recognizing the native human 17-1A antigen.

28. (Amended) An anti-human antigen receptor, said receptor being characterized in that it comprises a human VH chain and a human VL chain that have been functionally rearranged, said receptor [being specific for] recognizing the native human 17-1A antigen.

31. (Amended) The anti-human antigen receptor of claim 28 recognizing an epitope of the extracellular domain of the 17-1A antigen[, said epitope comprising at least one amino acid sequence selected from the group consisting of SEQ ID NOs: 29, 32, 34, 35, 80, 81, 98, 100].

32. (Amended) The anti-human antigen receptor of claim 28, wherein the VH chain comprises at least one [CDR of one of the following two sequences shown in Fig. 7 (corresponding to nucleotides 1 to 381) and Fig. 8 (corresponding to nucleotides 1 to 339)] of SEQ ID NOS:

143 and/or 145 and/or the VL chain comprises at least one [CDR of the following two sequences shown in Fig. 6 (corresponding to nucleotides 1 to 321) and Fig. 9 (corresponding to nucleotides 1 to 321)] of SEQ ID NOS:141 and/or 147.

65. (Amended) The anti-human antigen receptor according to claim 18, [obtained by a method further comprising the steps of obtaining, after selection, the suitable human VH and VL chains or the corresponding nucleic acids, and fusing said chains or the corresponding nucleic acids to:] further comprising, fused to said human VH and VL chains, (a) the same or other VH or VL chains[or the corresponding nucleic acids], (b) immunoglobulin constant regions of heavy (CH) or light chains (CL) or parts thereof[or the corresponding nucleic acids], or (c) non-immunoglobulin chains[or the corresponding nucleic acids], respectively.

67. (Amended) The anti-human antigen receptor according to claim 18, [obtained by a method] further comprising [the steps of obtaining, after selection, the human VH and VL chains and physically linking said] linked to said human VH and VL chains [to] a non-proteinous [pharmaceuticals] pharmaceutical and/or other biologically active [molecules] molecule.

68. (Canceled) The anti-human antigen receptor of claim 31 in which said epitope comprises the amino acid sequence of SEQ ID NO:29.

69. (Canceled) The anti-human antigen receptor of claim 31 in which said epitope comprises the amino acid sequence of SEQ ID NO:32.

70. (Canceled) The anti-human antigen receptor of claim 31 in which said epitope comprises the amino acid sequence of SEQ ID NO:34.

71. (Canceled) The anti-human antigen receptor of claim 31 in which said epitope comprises the amino acid sequence of SEQ ID NO:35.

72. (Canceled) The anti-human antigen receptor of claim 31 in which said epitope comprises the amino acid sequence of SEQ ID NO:80.

73. (Canceled) The anti-human antigen receptor of claim 31 in which said epitope comprises the amino acid sequence of SEQ ID NO:81.

74. (Canceled) The anti-human antigen receptor of claim 31 in which said epitope comprises the amino acid sequence of SEQ ID NO:98.

75. (Canceled) The anti-human antigen receptor of claim 31 in which said epitope comprises the amino acid sequence of SEQ ID NO:100.

APPENDIX B: CLEAN COPY OF PENDING CLAIMS (UNOFFICIAL)

18. An anti-human antigen receptor, the receptor being low or not immunogenic in humans, the receptor being further characterized as comprising a human VH chain and a human VL chain wherein at least said VH chain is derived from essentially unprimed mature human B-lymphocytes and said VL chain is derived from a naturally occurring human B cell repertoire.

19. The anti-human antigen receptor according to claim 18 which is an antibody or a fragment thereof.

20. The anti-human antigen receptor according to any one of claims 18, 19, 65, 66 or 67, said anti-human antigen receptor recognizing a human tumor antigen.

21. The anti-human antigen receptor according to any one of claims 18, 19, 65, 66 or 67, said anti-human antigen receptor recognizing the native human 17-1A antigen.

22. The anti-human antigen receptor according to any one of claims 18, 19, 65, 66 or 67, wherein said VH comprises at least one CDR of the amino acid sequence corresponding to nucleotides 1 to 381 of Seq. ID NO: 143 and said VL chain comprises at least one CDR of the amino acid sequence corresponding to nucleotides 1 to 321 of Seq. ID No: 141.

28. An anti-human antigen receptor, said receptor being characterized in that it comprises a human VH chain and a human VL chain that have been functionally rearranged, said receptor recognizing the native human 17-1A antigen.

29. The anti-human antigen receptor of claim 28 said anti-human antigen receptor being low or not immunogenic in humans.

31. The anti-human antigen receptor of claim 28 recognizing an epitope of the extracellular domain of the 17-1A antigen.

32. The anti-human antigen receptor of claim 28, wherein the VH chain comprises at least one of SEQ ID NOS: 143 and/or 145 and/or the VL chain comprises at least one of SEQ ID NOS:141 and/or 147.

34. The anti-human antigen receptor according to claim 18, 65, 66 or 67, said anti-human antigen receptor comprising a VH chain or at least one CDR.

35. The anti-human antigen receptor according to claim 34 wherein said CDR is CDR3.

36. The anti-human antigen receptor according to claim 18, 65, 66 or 67, said receptor comprising a VL chain or at least one CDR.

37. The anti-human antigen receptor according to claim 36 wherein said CDR is CDR3.

38. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 18, 65, 66 or 67, comprising a VH chain and a VL chain and a pharmaceutically acceptable carrier.

39. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 19, comprising a VH chain and a VL chain and a pharmaceutically acceptable carrier.

40. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 20, comprising a VH chain and a VL chain and a pharmaceutically acceptable carrier.

41. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 21, comprising a VH chain and a VL chain and a pharmaceutically acceptable carrier.

42. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 22, comprising a VH chain and a VL chain and a pharmaceutically acceptable carrier.

43. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 18, 65, 66 or 67, comprising at least one CDR and a pharmaceutically acceptable carrier.

44. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 19 comprising at least one CDR and a pharmaceutically acceptable carrier.

45. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 20 comprising at least one CDR and a pharmaceutically acceptable carrier.

46. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 21 comprising at least one CDR and a pharmaceutically acceptable carrier.

47. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 22 comprising at least one CDR and a pharmaceutically acceptable carrier.

48. A pharmaceutical composition comprising a receptor according to claim 43 wherein said CDR is CDR3.

49. A pharmaceutical composition comprising a receptor according to claim 44 wherein said CDR is CDR3.

50. A pharmaceutical composition according to claim 45 wherein said CDR is CDR3.

51. A pharmaceutical composition according to claim 46 wherein said CDR is CDR3.

52 A pharmaceutical composition according to claim 47 wherein said CDR is CDR3.

53. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 28, comprising a VH chain and a VL chain and a pharmaceutically acceptable carrier.

54. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 29, comprising a VH chain and a VL chain and a pharmaceutically acceptable carrier.

55. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 31, comprising a VH chain and a VL chain and a pharmaceutically acceptable carrier.

56. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 32, comprising a VH chain and a VL chain and a pharmaceutically acceptable carrier.

57. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 28 comprising at least one CDR and a pharmaceutically acceptable carrier.

58. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 29 comprising at least one CDR and a pharmaceutically acceptable carrier.

59. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 31 comprising at least one CDR and a pharmaceutically acceptable carrier.

60. A pharmaceutical composition comprising an anti-human antigen receptor according to claim 32 comprising at least one CDR and a pharmaceutically acceptable carrier.

61. A pharmaceutical composition comprising a receptor according to claim 57 wherein said CDR is CDR3.

62. A pharmaceutical composition comprising a receptor according to claim 58 wherein said CDR is CDR3.

63. A pharmaceutical composition comprising a receptor according to claim 59 wherein said CDR is CDR3.

64. A pharmaceutical composition comprising a receptor according to claim 60 wherein said CDR is CDR3.

65. The anti-human antigen receptor according to claim 18, further comprising, fused to said human VH and VL chains, (a) the same or other VH or VL chains, (b) immunoglobulin constant regions of heavy (CH) or light chains (CL) or parts thereof, or (c) non-immunoglobulin chains, respectively.

66. The anti-human antigen receptor according to claim 65, wherein said constant region chains are derived from human IgG1 or IgG3.

67. The anti-human antigen receptor according to claim 18, further comprising linked to said human VH and VL chains a non-proteinous pharmaceutical and/or other biologically active molecule.

Gp 1646

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December 27, 2002

CERTIFICATE OF MAILING
37 C.F.R 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231, on the date below:

December 27, 2002 — Date

Steven L. Highlander

Commissioner for Patents
Washington, DC 20231

Re: *U.S. Serial No. 09/403,107 Entitled: "NOVEL METHOD FOR THE PRODUCTION OF ANTIHUMAN ANTIGEN RECEPTORS AND USES THEREOF" by Kufer et al*
(Client Ref. 42-18-PCT/US.)
Matter No. 10212949/DEBE:017US

Enclosed for filing in the above-referenced patent application is:

1. Amendment and Response to Restriction Requirement; and

2. A return postcard to acknowledge receipt of these materials. Please date stamp and mail this postcard.

Should any fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason relating to the enclosed materials, the Commissioner is authorized to deduct said fees from Fulbright & Jaworski L.L.P. Account No.: 50-1212/10212949/SLH.

Very truly yours,

Steven L. Highlander

SLH/cpj
Encl: As noted
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